

US EPA ARCHIVE DOCUMENT



Fact Sheet

2005/2006 National Listing of Fish Advisories

Summary

Since 1993, EPA has made available to the public online an annual compendium of information on locally issued fish advisories and safe eating guidelines (<http://www.epa.gov/fishadvisories>). This information is provided to EPA by states, U.S. territories, Indian tribes, and local governments who issue fish consumption advisories and safe eating guidelines to inform people about the recommended level of consumption for fish caught in local waters. Fish advisories are advice to limit or avoid eating certain fish. Safe eating guidelines are designations of monitored waters where there is no restriction on eating specified species of fish. The **2005/2006 National Listing of Fish Advisories**¹ database shows that the number of fish advisories and the number of safe eating guidelines issued continues to rise. The increased number of new fish advisories issued is directly related to enhanced monitoring and assessment efforts by States, U.S. territories, tribes, and local governments. Most new fish advisories involve mercury and are believed to be the result of increased monitoring and assessment rather than increased U.S. releases of mercury, as U.S. mercury emissions have declined by almost 50% since 1990.

The national listing is available on the Internet at <http://www.epa.gov/fishadvisories>

Background

The states, District of Columbia, U.S. territories, tribes, and local governments (for simplicity, hereafter referred to as states) have primary responsibility for protecting their residents from potential health risks from eating contaminated fish caught in local waters. Forty-eight states, the District of Columbia, the U.S. territories of American Samoa and Guam, and five Indian tribes have fish consumption advisories in place. The states have developed their own fish advisory programs over the years, and there is variability among states in the scope and extent of monitoring, in how frequently previously tested waters are sampled again, in how decisions are made to place waters under advisory, and in the specific advice that is provided when contaminated fish are found. Because of this variability, it is difficult to draw national conclusions or to establish national trends in fish advisories; however, through this Technical Fact Sheet, EPA provides a summary of fish advisory information submitted by states.

Consumption advisories may include recommendations to limit or avoid eating certain fish and water-dependent wildlife species caught from specific waterbodies or, in some cases, from specific waterbody types (e.g., all lakes) due to contamination by one or more chemical contaminants. An advisory may be issued for the general population (i.e., general public), including recreational and subsistence fishers, or it may be issued specifically for sensitive subpopulations, such as pregnant women, nursing mothers, and children. A consumption advisory is not a regulation, but rather a voluntary recommendation issued to help protect public health.

States typically issue five types of advisories and bans to protect both the general population and specific subpopulations.

- **No-consumption advisory for the general population** – Issued when levels of chemical contamination in fish or wildlife pose a health risk to the general public. The general

population is advised to avoid eating certain types of locally caught fish or wildlife.

- **No-consumption advisory for sensitive subpopulations** – Issued when contaminant levels in fish or wildlife pose a health risk to sensitive subpopulations (such as children and pregnant women). Sensitive subpopulations are advised to avoid eating certain types of locally caught fish or wildlife.
- **Restricted-consumption advisory for the general population** – Issued when contaminant levels in fish or wildlife may pose a health risk if too much fish or wildlife is consumed. The general population is advised to limit eating certain types of locally caught fish or wildlife.
- **Restricted-consumption advisory for sensitive subpopulations** – Issued when contaminant levels in fish or wildlife may pose a health risk if too much fish or wildlife is consumed. Sensitive subpopulations are advised to limit eating certain types of locally caught fish or wildlife.
- **Commercial fishing ban** – Issued when high levels of contamination are found in fish caught for commercial purposes. These bans prohibit the commercial harvest and sale of fish and shellfish from a designated waterbody.

In addition to the five types of advisories, states are also increasingly issuing notices of statewide advisories and safe eating guidelines. A statewide advisory is issued to warn the public of the potential human health risks from widespread chemical contamination of certain species of fish from particular types of waterbodies (e.g., lakes, rivers, and/or coastal waters) within the state. An advisory for each waterbody name or type of waterbody may be listed as one advisory, regardless of the number of fish affected or the number of chemical contaminants detected. In contrast, a safe eating guideline is issued to inform the public that fish from specific waterbodies have been tested

¹ The National Listing of Fish Advisories Fact Sheet was produced annually through the 2004 report. In 2005, USEPA decided to release subsequent fact sheets on a bi-annual basis due to nominal changes in data from year to year. This fact sheet discusses changes in data for both the 2005 and 2006 data reporting cycles.

for chemical contaminants, and the results have shown that specific species of fish from these waters are safe to eat without consumption restrictions. As states increase their monitoring activities, so does the quantity of information available to better protect the public health.

National Listing of Fish Advisories Web Site

As of the end of 2006, the National Listing of Fish Advisories Web site lists 3,852 advisories in 48 of the 50 states, the District of Columbia, 2 of the 4 territories, and five Indian tribes. The Web site (<http://www.epa.gov/fishadvisories>) includes:

Information on species and size of fish or water-dependent wildlife under advisory

Chemical contaminants identified in the advisory

Geographic location of the waterbody

Lake acreage or river miles under advisory

Population for whom the advisory was issued

Meal size and meal frequency (number of meals per week or month) by advisory

Data on the concentrations of contaminants in fish tissue for 46 states and the District of Columbia

State and tribal contact information.

The user can generate national, regional, and state maps that summarize advisory information on the Web site. The site also includes the names of each state contact, a phone number, a fax number, and an e-mail address.

Synopsis of 2005 and 2006 National Listing of Fish Advisories

This fact sheet provides a summary of data included in the 2005 and 2006 updates to the National Listing of Fish Advisories. In past years, EPA reported fish advisories based on the number of advisories in effect at the end of that year, but this does not provide an indication of the geographic extent of the advisory. For example, a waterbody-specific advisory may be issued to cover a single waterbody (e.g., a 20-acre lake), whereas a single statewide lake advisory can cover all lake acres within the state's jurisdiction (up to 12,787,200 acres in one state). Because of the dramatic range in the geographic size of lake acres and river miles affected by a single advisory, the number of advisories does not tell the full story of the geographic extent of waters subject to state advice to limit fish consumption. Therefore, EPA now provides information on the total lake acres and total river miles where advisories are currently in effect. This fact sheet presents and discusses data for both 2005 and 2006, but the 2006 data summary reflects the most recent updates to the online database.

The *EPA 2005 National Listing of Fish Advisories* indicates that states reported issuing 158 new fish advisories in 2005 and that 162 previous advisories were reactivated, bringing the total number of active advisories in effect to 3,373 in 2005 (Figure 1). The 3,373 advisories in the national listing at the end of 2005 represented 38% of the nation's total lake acreage and 26% of the nation's total river miles. Approximately 15,202,580 lake acres and 930,097 river miles were under advisory in 2005. This represented a 3% increase in the number of lake acres and a 2% increase in river miles under advisory from 2004 to 2005.

The *EPA 2006 National Listing of Fish Advisories* indicates that states reported issuing 534 new fish advisories in 2006 and that 122 previous advisories were reactivated, bringing the total number of advisories in effect to 3,852 in 2006 (Figure 2). The 3,852 advisories in the national listing at the end of 2006 still represent 38% of the nation's total lake acreage and 26% of the nation's total river miles. These percentages represent approximately 15,368,036 lake acres and 930,938 river miles under advisory in 2006.

In 2005 and 2006, 22 states and the District of Columbia reported that 100% of their lake acres and river miles were under advisory for one or more contaminants: Connecticut, District of Columbia, Florida, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Missouri, Montana, New Hampshire, New Jersey, New York, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, Vermont, Washington, West Virginia, and Wisconsin. The percentages of lake acres and river miles under advisory in 2005 and 2006 for the remaining states are shown in Table 1.

Table 1. Percentage of Lake Acres and River Miles Under Advisory by State

State	% Lake acres under advisory		% River miles under advisory	
	2005	2006	2005	2006
Alabama	0.1%	0.1%	0.6%	0.7%
Arizona	1.2%	1.2%	0.1%	0.1%
Arkansas	0.7%	0.7%	0.3%	0.3%
California	19.5%	19.7%	0.1%	0.1%
Colorado	12.0%	16.5%	0.0%	0.0%
Delaware	2.4%	8.9%	20.0%	24.3%
Georgia	11.0%	11.2%	3.7%	4.2%
Hawaii	0.0%	0.0%	16.2%	16.2%
Idaho	21.9%	29.8%	0.0%	0.0%
Iowa	0.1%	0.2%	0.0%	0.2%
Kansas	0.0%	0.0%	0.1%	0.1%
Louisiana	1.4%	3.5%	1.2%	1.2%
Michigan	100.0%	100.0%	3.5%	3.5%
Minnesota	100.0%	100.0%	3.5%	3.5%
Mississippi	7.2%	7.2%	0.3%	0.3%
Nebraska	3.8%	3.9%	0.8%	0.9%
Nevada	0.0%	0.0%	0.4%	0.4%
New Mexico	19.5%	19.5%	0.1%	0.1%
North Carolina	0.1%	0.1%	0.1%	0.2%
Oregon	2.6%	2.6%	0.5%	0.5%
South Carolina	4.0%	16.7%	5.2%	5.2%
South Dakota	1.4%	1.4%	0.0%	0.0%
Tennessee	9.2%	9.2%	0.6%	0.6%
Texas	12.2%	12.5%	0.1%	0.1%
Utah	0.0%	0.0%	0.1%	0.1%
Virginia	8.5%	9.3%	4.7%	4.7%

Figure 1. Total Number of Fish Consumption Advisories in 2005.

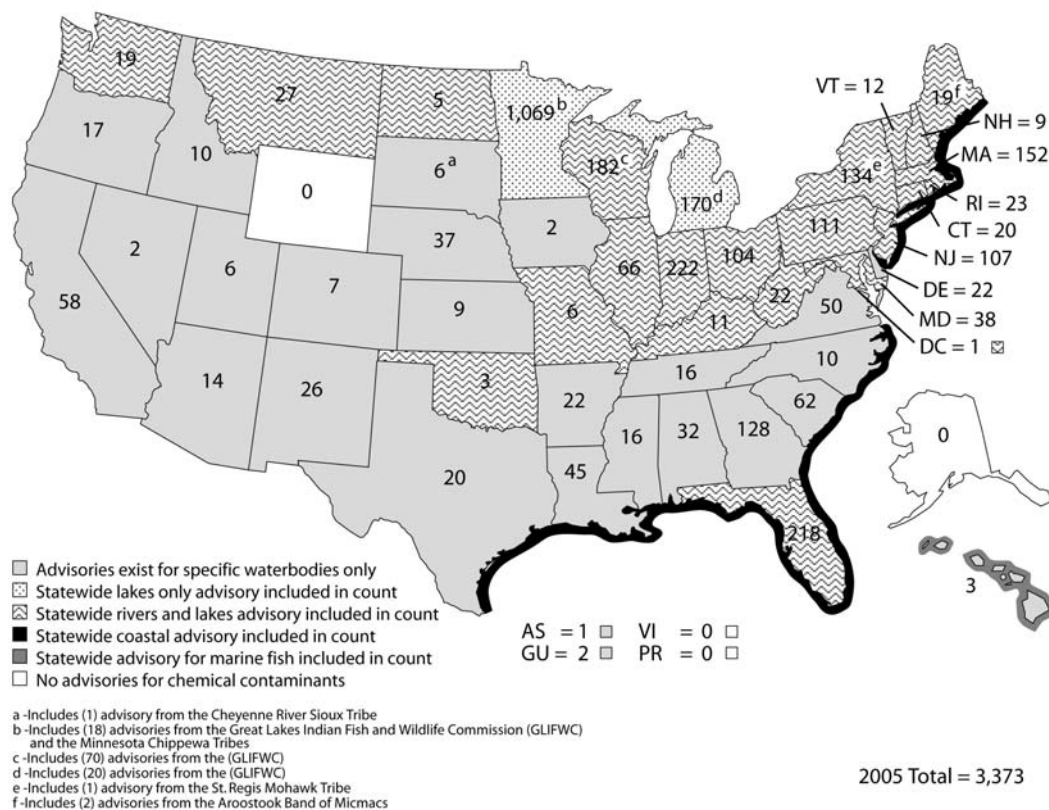
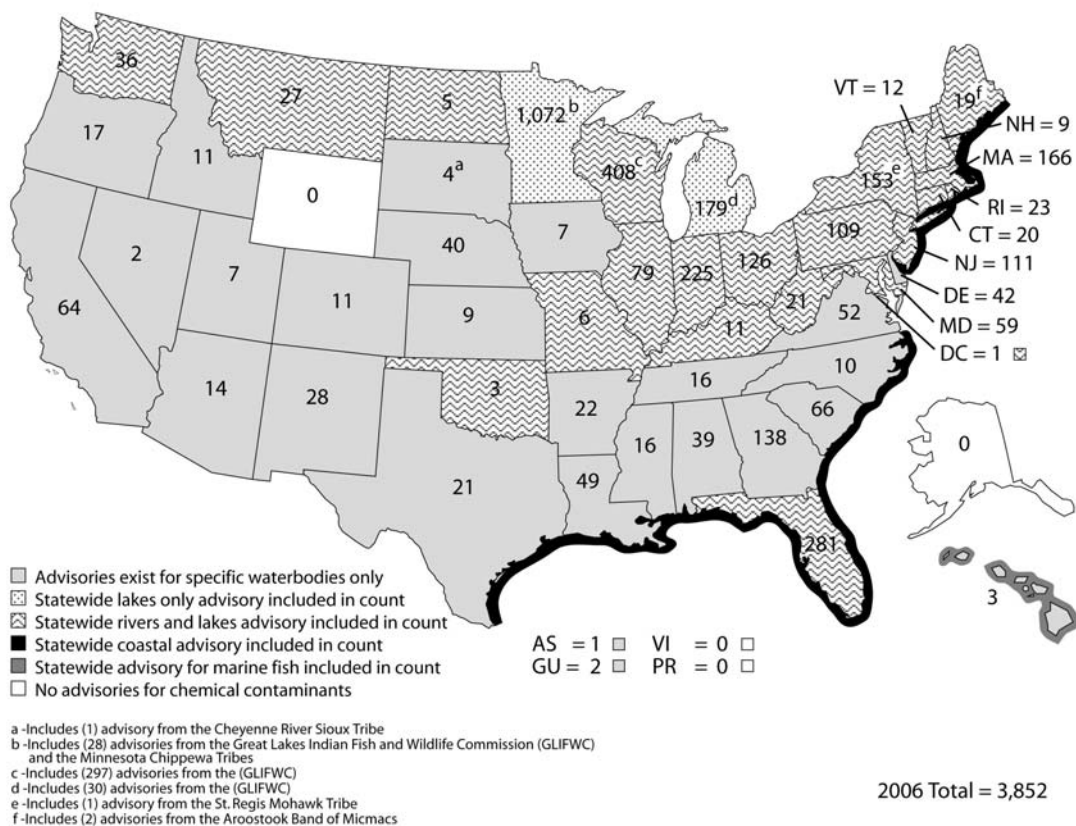


Figure 2. Total Number of Fish Consumption Advisories in 2006



All (100%) of the Great Lakes and their connecting waters were under advisory for at least one contaminant in 2005 and 2006 (Table 2). The Great Lakes and their connecting waters are considered separately from other waters and are not included in the above calculations of total lake acres or river miles.

Table 2. Fish Advisories Issued for the Great Lakes

Great Lakes	PCBs	Dioxins	Mercury	Chlordane	Mirex	DDT
Lake Superior	●	●	●	●		
Lake Michigan	●	●	●	●		●
Lake Huron	●	●	●	●		
Lake Erie	●	●	●			
Lake Ontario	●	●			●	

The number of lake acres and river miles under advisory is related to the number of assessments of chemical contaminants in fish and water-dependent wildlife tissues, as well as the states' use of statewide advisories.

A statewide advisory is issued to warn the public of potential contamination of specific species of fish or water-dependent wildlife (e.g., turtles or waterfowl) in certain types of waterbodies (e.g., lakes, rivers, or coastal waters) across the state. Thirty-three states had statewide advisories in effect in 2005 (Table 3). Oklahoma and West Virginia reported new statewide advisories for lakes and rivers in 2005. There were no changes to the number of statewide advisories in 2006.

In addition to the Great Lakes, other large lakes and estuaries are currently under advisory for a variety of contaminants. For example, the main stem of the Chesapeake Bay is under advisory. The Potomac, James, Back, Anacostia, Piankatank, and Patapsco rivers that connect to the Chesapeake Bay continue to be under advisory. Baltimore Harbor, which also connects to the Chesapeake Bay, is under advisory for chlordane and PCB contamination in fish and blue crabs. Portions of the upper bay of New York Harbor, Delaware Bay and River, and portions of Puget Sound have also been placed under advisory in the last two years.

Fifteen states have issued fish advisories for all of their coastal waters (Table 3). Almost 65% of the coastline of the United States (excluding Alaska, which has no advisories) continues to remain under advisory. Based on coastal size estimates from the National Oceanic and Atmospheric Administration, 92% of the Atlantic coast and 100% of the Gulf coast were under advisory in 2005 and 2006. The Atlantic coast advisories have been issued for a wide variety of chemical contaminants including mercury, PCBs, dioxins, and cadmium. All of the Gulf coast advisories have been issued for mercury. No Pacific coast state has issued a statewide advisory for any of its coastal waters, although several local areas along the Pacific coast are under advisory. Hawaii still maintains a statewide advisory for mercury in several marine fish species.

Table 3. Summary of Statewide Advisories by Waterbody Type and Year Issued

State	Lake	Issued	River	Issued	Coastal Waters	Issued
Alabama					Mercury	1996
Connecticut	Mercury	1996	Mercury	1996	PCBs	1993
Dist. of Columbia	PCBs	1993	PCBs	1993		
Florida	Mercury	2002	Mercury	2002	Mercury	1993
Georgia					Mercury	2000
Hawaii					Mercury*	2003
Illinois	Mercury	2002	Mercury	2002		
Indiana	Mercury	2004	Mercury PCBs	1996		
Kentucky	Mercury	2000	Mercury	2000		
Louisiana					Mercury	1997
Maine	Mercury	1994	Mercury	1994	Dioxins Mercury PCBs	1994
Maryland	Mercury	2001	Mercury	2004		
Massachusetts	Mercury	1996	Mercury	1996	PCBs Mercury	1994
Michigan	Mercury	1993				
Minnesota	Mercury PCBs	1999				
Mississippi					Mercury	1998
Missouri	Mercury	2001	Mercury	2001		
Montana	Mercury	2003	Mercury	2003		
New Hampshire	Mercury	1995	Mercury	1995	PCBs Mercury Dioxin	1994
New Jersey	Mercury	1995	Mercury	1995	PCBs Dioxins	1993
New York	PCBs Chlordane Mirex DDT	1994	PCBs Chlordane Mirex DDT	1994	Cadmium Dioxins PCBs	1995
North Carolina					Mercury	2000
North Dakota	Mercury	2001	Mercury	2001		
Ohio	Mercury	1997	Mercury	1997		
Oklahoma	Mercury	2005	Mercury	2005		
Pennsylvania	Mercury	2001	Mercury	2001		
Rhode Island	Mercury	2002	Mercury	2002	PCBs Mercury	1993
South Carolina					Mercury	2001
Texas					Mercury	1997
Vermont	Mercury	1995	Mercury	1995		
Washington	Mercury	2003	Mercury	2003		
West Virginia	Mercury	2005	Mercury	2005		
Wisconsin	Mercury	2000	Mercury	2000		

* Hawaii has a statewide advisory for mercury in marine fish.

Safe Eating Guidelines

EPA encourages states to issue safe eating guidelines when providing advisory information. In addition to issuing statewide advisories warning the public about chemical contaminants in fish tissue, states are increasingly issuing safe eating guidelines to inform the public that fish from specific waterbodies or certain species of fish have been tested for chemical contaminants and have been shown to contain very low levels of contaminants. By issuing safe eating guidelines, the states are identifying monitored waters or species for the public where no restrictions

on eating fish apply, as well as promoting enjoyment of recreational fishing.

In 1993, the first year that the National Listing of Fish Advisories collected data on safe eating guidelines, there were only 20 such guidelines in effect. This number increased slowly until 2004, when three states reported 827 new safe eating guidelines, bringing the 2004 total to 1,213. The total number of safe eating guidelines dropped slightly to 1,193 in 2005, but rose to 1,247 in 2006. Table 4 shows the trend in the issuance of safe eating guidelines since 1993. As of December 31, 2006, 22 states have issued safe eating guidelines. The largest numbers of safe eating guidelines have been issued in Minnesota (834), Georgia (171), Texas (46) and South Carolina (43). Alabama doubled their total number of safe eating guidelines from 16 to 32 between 2005 and 2006. Washington added 20 new safe eating guidelines. No tribes have issued safe eating guidelines.

Five states have issued statewide safe eating guidelines. In 2001, Alaska issued a statewide guideline to inform the public that all of Alaska's fish are safe to eat without restrictions. In 2002, Wisconsin issued a safe eating guideline for bluegill and other sunfish, yellow perch, white and black crappie, and bullheads in all lakes statewide. Minnesota issued a similar guideline for panfish statewide. Connecticut and Vermont also have species-specific statewide safe eating guidelines for lakes and rivers. There are a few waterbody-specific exceptions to the safe eating guidelines, so consumers are advised to review waterbody-specific information on state Web sites.

Table 4. Total Safe Eating Guidelines Issued Since 1993

Year Issued	New Advisories	Cumulative Advisories
1993	20	20
1994	12	32
1995	35	67
1996	10	77
1997	2	79
1998	25	104
1999	44	148
2000	7	155
2001	20	175
2002	164	339
2003	47	386
2004	827	1,213
2005	-20	1,193
2006	54	1,247

In 2006, 3% of river miles and 18% of lake acres in the conterminous United States had safe eating guidelines for at least one fish species. Approximately 96,625 river miles and 5,285,923 lake acres had safe eating guidelines in 2006. Between 2004 and 2006 the area for which there were safe eating guidelines increased by 20,556 river miles and by 238,002 lake acres. The number of these guidelines is likely to grow as more states identify safe fishing waters or species (e.g., sunfish and other panfish) that do not tend to accumulate chemical contaminants in their tissues to the same extent as long-lived predatory species (e.g., largemouth bass, walleye, northern pike, catfish). These guidelines will help direct the public toward making more informed decisions about the waterbodies in which they fish, as well as healthier choices about the species that they choose to eat.

Bioaccumulative Contaminants

Although there are advisories in the United States for 44 different chemical contaminants, 88% of all advisories in effect in 2006 involved five bioaccumulative chemical contaminants: mercury, PCBs, chlordane, dioxins, and DDT. Bioaccumulative chemical contaminants accumulate in the tissues of aquatic organisms at concentrations many times higher than concentrations in the water. They can persist for relatively long periods in sediments, where bottom-dwelling organisms that are low in the food chain can accumulate them and pass them up the food chain to fish. Concentrations of bioaccumulative contaminants in the tissues of aquatic organisms may increase at each level of the food chain. As a result, top predators in a food chain, such as largemouth bass or walleye, may have concentrations of bioaccumulative contaminants in their tissues a million times higher than the concentrations found in the waterbodies.

Mercury

The total number of advisories for mercury increased from 2,436 in 2004, to 2,682 in 2005 and 3,080 in 2006. Forty-eight states, 1 territory, and 2 tribes have issued mercury advisories. Eighty percent of all advisories have been issued, at least in part, because of mercury. The increase in the number of mercury advisories in 2005 and 2006 can be attributed to the issuance of new mercury advisories by 25 states, and American Samoa. Most of the new mercury advisories issued in 2005 and 2006 were in Wisconsin (293), Michigan (46), New York (36) and Minnesota (32). In 2005, American Samoa, Kansas, Oklahoma and Utah issued mercury advisories for the first time, and Iowa did the same in 2006.

A total of 14,035,676 lake acres and 882,428 river miles were under advisory for mercury in 2005. In 2006, these numbers increased to 14,177,175 lake acres and 882,963 river miles. This represents an increase of 993,427 lake acres (+8%) and 117,564 river miles (+15%) under advisory between 2004 and 2006. The increases in area and miles are primarily due to new statewide advisories for mercury in Oklahoma and West Virginia in 2005, along with new advisories issued in Louisiana, Idaho and New York in 2006.

Currently, 23 states (Connecticut, Florida, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, Vermont, Washington, Wisconsin and West Virginia) have issued statewide advisories for mercury in freshwater lakes and/or rivers. Twelve states (Alabama, Florida, Georgia, Louisiana, Maine, Massachusetts, Mississippi, New Hampshire, North Carolina, Rhode Island, South Carolina, and Texas) have statewide advisories for mercury in their coastal waters. Hawaii has a statewide advisory for mercury in marine fish. The Micmac tribe of Maine has two reservation-wide advisories in effect for mercury in freshwater and marine fish (including lobster). In addition, the Cheyenne River Sioux Tribe has one reservation-wide advisory for mercury in rivers, lakes, and stock ponds.

PCBs

In 2005, there were 953 advisories in place for PCBs, with 38 states, American Samoa, Guam and the St. Regis Mohawk Tribe reporting PCB advisories in 2005. In 2006, there were 1,023 advisories in place for PCBs. Between 2004 and 2006, the number of PCB advisories increased from 873 to 1,023. Ten states added new advisories for PCBs in 2005, and 13

states added new advisories in 2006. New Mexico issued new PCB advisories for the first time. There were 4,652,648 lake acres and 118,904 river miles under advisory for PCBs in 2005, and 4,699,936 lake acres and 132,228 river miles under advisory in 2006. Four states (District of Columbia, Indiana, Minnesota, and New York) have statewide freshwater (river and/or lake) advisories for PCBs, and seven other states (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, and Rhode Island) have PCB advisories for all of their coastal marine waters.

Chlordane

All uses of the pesticide chlordane were banned in the United States in 1988 and the compound continues to degrade in the environment. However, due in part to increased monitoring, the number of chlordane advisories has risen slightly from 2004 to 2006. In 2005 there were 101 fish advisories for chlordane in effect and in 2006 the total increased to 105. The states adding new chlordane advisories in 2006 were South Carolina (1), Massachusetts (1) and Delaware (2). The chlordane advisories covered 847,771 lake acres and 58,668 river miles in 2006, which represents an increase of 529 lake acres and 4,536 river miles since 2004.

Dioxins

The number of dioxin advisories rose from 106 in 2004 to 111 in 2005, and 125 in 2006. A total of 38,181 lake acres and 13,231 river miles were under advisory for dioxin in 2006. Although dioxins are one of the five major contaminants that have resulted in the issuance of health advisories, the geographic extent of dioxin advisories is extremely limited compared to that for the other four major contaminants. This is due in part to the limited monitoring of dioxins because of the high costs associated with laboratory analysis. Also, dioxins have been associated primarily with specific locations near some pulp and paper plants that use a bleach kraft process, as well as with other types of chemical manufacturing facilities or incineration facilities.

DDT

Although the use of DDT, an organochlorine pesticide, has been banned in the U.S. since 1975, the total number of DDT advisories (or its degradation products, DDE and DDD) has risen from 67 in 2004 to 73 in 2005 and 84 in 2006. The majority of new DDT advisories were issued by Delaware and Texas. In 2006, 858,920 lake acres and 53,468 river miles were under advisory for DDT, which represents an 8% increase in lake acres and essentially no change in river miles since 2004.

Other Contaminants

Although the previously discussed five bioaccumulative contaminant groups account for 88% of the total number of advisories, the remaining 12% of all fish advisories are caused by other contaminants. These include organochlorine pesticides (i.e., dieldrin, heptachlor epoxide, kepone, mirex, and toxaphene), heavy metals (e.g., arsenic, cadmium, chromium, copper, lead, selenium, and zinc), as well as a myriad of other chemical compounds, including creosote, polycyclic aromatic hydrocarbons (PAHs), hexachlorobenzene, pentachlorophenol, and diethylphthalate.

In 2005, five states issued 27 new advisories for other contaminants: Florida, Georgia, Indiana, Kansas, and Texas. Florida issued one advisory for Saxitoxin. Georgia and Indiana issued new advisories for contaminants not specified, while

Kansas issued new advisories for lead and cadmium and Texas for zinc, arsenic and cadmium. In 2005, 2,483,466 lake acres and 102,212 river miles were estimated to be under advisory for other contaminants.

In 2006, eleven states issued 69 new advisories for other contaminants: Alabama, California, Delaware, Florida, Georgia, Maryland, Nebraska, New Jersey, New York, South Carolina, and Washington. In 2006, 2,873,349 lake acres and 126,323 river miles were under advisory for other contaminants.

Although these other chemical contaminants represent only 12% of the total number of advisories, the extent of the area under advisory for these contaminants exceeds both the lake acres and river miles under advisory for Chlordane, Dioxins and DDT combined. The majority of lake acres and river miles under advisory for other chemical contaminants are the result of a statewide advisory in Maine for cadmium, and a statewide advisory in New York for Mirex.

Wildlife Advisories

In addition to advisories for fish, the National Listing of Fish Advisories Web site also contains several water-dependent wildlife advisories. In 2005, no new advisories were issued for water-dependent wildlife, but Washington issued an advisory for seaweed. In 2006, Utah issued an advisory for mercury in ducks. States have issued wildlife advisories in previous years that are still in effect. Four states have issued consumption advisories for turtles: Massachusetts (1), Minnesota (6), New York (statewide advisory), and Rhode Island (1). In addition, Massachusetts has an advisory for frogs; New York has a statewide advisory for waterfowl; Utah has an advisory for American coot and ducks, and Maine issued a statewide advisory for cadmium in moose liver and kidneys.

National Advice Concerning Mercury in Fish

In 2004, EPA and the U.S. Food and Drug Administration (FDA) issued advice for women who might become pregnant, women who are pregnant, nursing mothers, and young children. The national advice is not included in the statistics presented in this fact sheet. The following advice is still in effect:

"Fish and shellfish are an important part of a healthy diet. Fish and shellfish contain high-quality protein and other essential nutrients, are low in saturated fat, and contain omega-3 fatty acids. A well-balanced diet that includes a variety of fish and shellfish can contribute to heart health and children's proper growth and development; therefore, women and young children in particular should include fish or shellfish in their diets due to the many nutritional benefits.

Nearly all fish and shellfish, however, contain traces of mercury. For most people, the risk from mercury from eating fish and shellfish is not a health concern. Yet some fish and shellfish contain higher levels of mercury that may harm an unborn baby or young child's developing nervous system. The risks from mercury in fish and shellfish depend on the amount of fish and shellfish eaten and the levels of mercury in the fish and shellfish. Therefore, the FDA and EPA are advising women who may become pregnant, pregnant women, nursing mothers, and young children to avoid some types of fish and to only eat fish and shellfish that are lower in mercury."

By following the three recommendations listed below for selecting and eating fish or shellfish, women and young children will receive the benefits of eating fish and shellfish and be confident that they have reduced their exposure to the harmful effects of mercury.

- Do not eat shark, swordfish, king mackerel, or tilefish because they contain high levels of mercury.
- Eat up to 12 ounces (2 average meals) a week of a variety of fish and shellfish that are lower in mercury.
 - Five of the most commonly consumed fish that are low in mercury are shrimp, canned light tuna, salmon, pollock, and catfish.
 - Another commonly eaten fish, albacore ("white") tuna has more mercury than canned light tuna. Eat up to 6 ounces (one average meal) of albacore tuna per week.
- Check local advisories about the safety of fish caught by family and friends in local lakes, rivers, and coastal areas. If no advice is available, eat up to 6 ounces (one average meal) per week of fish caught from local waters, but do not consume any other fish during that week.

Follow these same recommendations when including fish and shellfish in a young child's diet, but serve smaller portions. More information on the joint federal advisory is available at www.epa.gov/fishadvisories.

For More Information

For more information on specific advisories within a state, contact the appropriate state agency listed on the National Listing of Fish Advisories Web site at <http://www.epa.gov/fishadvisories>. For restricted consumption advisories, state health departments provide specific information on the meal size and meal frequency (number of meals per week or month) that is considered safe to eat.

For more information on how to reduce exposure, consult EPA's brochure *What You Need to Know About Mercury in Fish and Shellfish*, available in several languages on EPA's fish advisory Web site: <http://www.epa.gov/fishadvisories>.

For more information on the National Listing of Fish Advisories, contact:

Erica Fleisig
U.S. Environmental Protection Agency
Office of Science and Technology (4305T)
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone 202-566-1057
E-mail fleisig.eric@epa.gov